

REMARKS

Applicants' undersigned attorney thanks the Examiner for her comments. Applicants respectfully request reconsideration of this patent application, particularly in view of the above Amendment and the following remarks. Currently, Claims 1-45 are pending.

The present invention is directed to film compositions including a matrix polymer, filler material, and at least one polymer incompatible with the matrix polymer. The matrix polymer consists essentially of an ethylene homopolymer or copolymer, optionally in combination with a compatible olefin polymer or copolymer. During film stretching, the incompatible polymer enhances void formation around the inorganic filler particles dispersed within the matrix polymer.

Amendment to the Claims

Claims 1-45 have been examined with no claims being allowed. Amended Claims 1, 12, and 32 are included herein. No new matter has been added by this amendment.

Applicants have amended Claims 1, 12, and 32 to include the limitation of the matrix polymer consisting essentially of an ethylene homopolymer or copolymer, optionally in combination with a compatible olefin polymer or copolymer. Support for this amendment is found at page 6, lines 18-20, and at page 8, lines 17-21, of the specification

No additional fee is due for this Amendment because the number of independent claims remains unchanged and the total number of claims also remains unchanged.

Claim Rejections - 35 U.S.C. §102

The rejection of Claims 1-2, 4-9, 11-13, 16-21, 23-26, 29-33, 35-40, and 42-45 under 35 U.S.C. §102(b) as being anticipated by Stopper et al. (WO 98/44025) is respectfully traversed, particularly in view of the above Amendment and the following remarks.

Stopper et al. disclose a breathable microporous film that includes a thermoplastic polymer, filler particles, and a mono-functional hindered phenol. This film has been designed to have improved strength and stretch characteristics compared to conventional filled films, such that the film is more tolerant of irregularities when stretched. The film is suitable for use in infection control products, protective covers, and other articles or fabrics having barrier properties.

For a reference to anticipate a claim, the reference must disclose each and every element or limitation of the claim. Stopper et al. do not disclose each and every element or limitation of currently amended independent Claims 1, 12, and 32. Applicants' invention as claimed in currently amended independent Claims 1, 12, and 32 requires that the breathable film include a matrix polymer consisting essentially of an ethylene homopolymer or copolymer, optionally in combination with a compatible olefin polymer or copolymer, and a polymer incompatible with the matrix polymer. Stopper et al. fail to disclose the inclusion of a polymer incompatible with a matrix polymer within the breathable film.

The Examiner cites the list of polyolefins in Stopper et al., which lists both polypropylene and polyethylene among others, as evidence that Stopper et al. disclose an incompatible polymer. However, because the film in Stopper et al. is designed to be a "tough" film having barrier properties suitable for use in infection control products and other viral-blocking applications, Stopper et al. teaches away from combining incompatible polymers and instead discloses a thermoplastic polymer including any of a number of suitable polymers, including combinations of compatible forms of various polymers.

The film in the present invention is a highly breathable stretch-thinned film having enhanced breathability. Unlike the film in Stopper et al., which is more tolerant of irregularities when stretched (page 12, lines 11-21), the film in the present invention has enhanced or magnified void formation upon elongation, conceivably due to poor interfacial adhesion between the matrix polymer and the incompatible polymer (page 3, lines 13-16). Since Stopper et al. disclose a toughened film having enhanced ability to withstand irregularities, such as filler agglomerates, upon

stretching, Stopper et al. essentially *discourage* the combination of incompatible polymers which are likely to display poor interfacial adhesion.

For at least the reasons presented above, Applicants respectfully submit that currently amended Claims 1, 12, and 32 are not anticipated by Stopper et al. Because Claims 2, 4-9, 11, 13, 16-21, 23-26, 29-31, 33, 35-40, and 42-45 depend from Claims 1, 12, and 32, respectively, these claims are also not anticipated by Stopper et al. Thus, Applicants respectfully request withdrawal of this rejection.

Claim Rejections - 35 U.S.C. §103

The rejection of Claims 1-45 under 35 U.S.C. §103(a) as being unpatentable over Stopper et al. in view of Burns, Jr. et al. (U.S. Patent No. 6,328,723, hereinafter "Burns") is respectfully traversed.

As mentioned above, Stopper et al. disclose a breathable microporous film that discourages the combination of incompatible polymers.

Burns discloses an absorbent article including a breathable microporous film. The film is composed of a thermoplastic resin and inorganic fillers dispersed in the thermoplastic resin. Burns lists ultra low density polyethylene (ULDPE) as one example of a suitable thermoplastic polymer, but does not disclose or suggest that ULDPE is *equivalent to* the polymers listed in Stopper et al. Furthermore, Burns fails to disclose or suggest the inclusion of any incompatible polymers within the film, but instead lists a variety of thermoplastic polymers including polyethylene and polypropylene.

Applicants use the term "incompatible polymer" to refer to any polymer that is thermodynamically incompatible with the matrix polymer, i.e., a polymer that will not homogeneously mix with the matrix polymer to form a single phase, and forms a separate phase within the matrix polymer, and the term "matrix polymer" to refer to a continuous phase polymer component, or a continuous phase blend of two or more compatible, miscible polymers (Page 6, lines 15-20). Neither Stopper et al. nor Burns, nor the combination thereof, discloses or suggests the inclusion of any incompatible polymers in combination with a matrix polymer, in the sense in which these terms are used in the present application.

Additionally, in the present invention, the amount of incompatible polymer should be less than the amount of the matrix polymer, more particularly the incompatible polymer should account for 0.1-25%, or 1-20%, or 2-10% by weight of the film (Page 8, lines 12-16). The Examiner suggests that it would have been obvious to one of ordinary skill in the art to have optimized the relative proportions of the matrix polymer and the incompatible polymer through the process of routine experimentation. However, since neither Stopper et al. nor Burns, alone or in combination, discloses or suggests the inclusion of any incompatible polymers, it is unlikely that a person of ordinary skill in the art would find any motivation in either of these references to include any amount of incompatible polymers in a film. Instead, both Stopper et al. and Burns disclose polypropylene and polyethylene as suitable types of thermoplastic resin (i.e., matrix polymer) into which inorganic fillers could be dispersed, and thereby fail to disclose or suggest minor amounts (i.e., 0.1-25%, or 2-10%) of any of these polymers.

The Examiner suggests that it would have been obvious to have used waste polymers motivated by the expectation that waste polymers are readily available, are less expensive and their use is environmentally friendly. However, laminate waste material includes more than just polypropylene. For example, the laminate waste material used in the Example on pages 14-16 of the present application had the following composition, in percentages by weight: 37.20% CaCO₃, 35.80% polypropylene, 20.30% LLDPE, 3.36% ethylene vinyl acetate, and 3.36% copolymer (Page 15, lines 9-12). Neither Stopper et al. nor Burns, nor the combination thereof, discloses or suggests the inclusion of this or any other laminate waste material. Furthermore, as illustrated in the Example on pages 14-16 of the present application, laminate waste material was found to improve the breathability of the same film made from virgin material by up to 44% overall.

For at least the reasons given above, Applicants respectfully submit that the teachings of Stopper et al. in view of Burns fail to disclose or suggest Applicants' claimed invention. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

Conclusion

Applicants intend to be fully responsive to the outstanding Office Action. If the Examiner detects any issue which the Examiner believes Applicants have not addressed in this response, Applicants' undersigned attorney requests a telephone interview with the Examiner.

Applicants sincerely believe that this Patent Application is now in condition for allowance and, thus, respectfully request early allowance.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Melanie I. Rauch", written in a cursive style.

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